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10/15/2003

Joe P. Said

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CHARLES C. VALAUSKAS
BANIAK PINE & GANNON
Suite 1200
150 N. Wacker Drive
Chicago, IL 60606

EXAMINER

SIEDLER, DOROTHY S

ART UNIT

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2626

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/686,127	Applicant(s) SAID ET AL.	
	Examiner Dorothy Sarah Siedler	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-12 and 14-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-12, and 14-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☒ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☐ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

DETAILED ACTION

In view of the Appeal brief filed on April 25, 2008, PROSECUTION IS HEREBY REOPENED. The new grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Richemond Dorvil/

Supervisory Patent Examiner, Art Unit 2626.

Response to Arguments

Applicant's arguments, see Appeal Brief, filed April 25, 2008, with respect to the 35 U.S.C. §112 2nd rejection of claim 8, 9, 19, 21 and 22 have been fully considered and are persuasive. The rejections are withdrawn.

Applicant's arguments, see Remarks, filed April 25, 2008, with respect to the rejection(s) of claim(s) 1-17 and 19-22 under 35 U.S.C. §103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of **Johnson**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-12, 14-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Johnson** (9,748,974) in view of **W3C** ("Natural Language Semantics Markup Language for the Speech Interface Framework" 2000).

As per claim 1, **Johnson** discloses a method of input conversion to output, said conversion method comprising:

entering a first stage input and a second input (column 3 lines 29 - 60, *the system enables multimodal input, for example speech and keyboard input*);

translating the first input and the second input into an electronic format (column 3 lines 63-67, *the speech and non-speech input are processed by a natural language*

processor as part of a computer system, therefore the inputs must have been translated into electronic format);

Johnson does not disclose converting the electronic format into standard XML encoded with accessibility information, transforming the standard XML encoded with accessibility information into individual version of XML dependent on desired output and utilizing a rendering engine to modify the individual version of XML into a format for the output. However, **Johnson** does disclose determining verbal and non-verbal semantic information (accessibility information) from the input and converting that into an individual version dependent on the desired output (column 3 line 63 - column 5 line-32). The combined multimodal input, including a spoken phrase and a typed input or item-in-focus input, is sent to a natural language processor where it is processed by a parser/semantic interpreter and then a dialog manager. The output of the natural language processor is then sent to a dispatcher, which determines which application should process the information. Once a determination has been made the information is sent to the corresponding application where an appropriate response is generated (rendering engine), for example as synthesized speech, text pop up window or video clip, depending on the nature of the request and the current application. In addition, XML is a well known markup language which is similar to HTML but was designed to structure, store and carry data rather than display data. XML was designed to be self-descriptive: therefore tags are not predefined and must be defined by the user. Elements and attributes- which provide additional information about the elements- are defined by the user and can be extended to carry additional information. The W3C

international consortium has also published specifications for an XML language that provides semantic interpretations for a variety of speech and language inputs (**W3C**). The Natural Language Semantics Markup supports a Voice Browser, which functions with a variety of input modalities and can represent meta-dialog information or meta-task utterances (section 1.1 and section 2.8). XML files can also be converted into a different XML file using XSLT, or Extensible Stylesheet Language Transformations. XSLT is a language used to convert one element on an XML document into an element of another XML document.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to convert the electronic format into standard XML encoded with accessibility information, transform the standard XML encoded with accessibility information into individual version of XML dependent on desired output and utilize a rendering engine to modify the individual version of XML into a format for the output in **Johnson**, since one of ordinary skill has good reason to pursue the options within his or her technical grasp. Additionally, it would have been obvious to combine the known multimodal interface in **Johnson** with XML, since XML data is stored as plain text data, and can therefore be easily shared amongst different applications and exchanged between incompatible systems.

As per claim 2, **Johnson** in view of **W3C** disclose the conversion method of claim 1, and **Johnson** further discloses wherein said entering step includes speaking (column 3 lines 44-46).

.As per claim 3, **Johnson** in view of **W3C** disclose the conversion method of claim 1, neither disclose wherein said entering step includes gesturing. However, **Johnson** does disclose that the input to the system can include any modality (column 3 lines 44-46). This suggests the system is capable of interpreting gestures as in input.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have an entering step that includes gesturing in **Johnson** and **WC3**, since it would enable users with speech disabilities to easily enter data.

As per claim 4, **Johnson** in view of **W3C** disclose the conversion method of claim 1, and **Johnson** further discloses wherein said entering step includes writing (column 3 lines 44-46).

As per claim 6, **Johnson** in view of **W3C** disclose the conversion method of claim 1, and **Johnson** further discloses wherein said entering step includes semantic information (column 3 lines 49-54).

As per claim 7, **Johnson** in view of **W3C** disclose the conversion method of claim 1, however neither disclose wherein said entering step includes providing formatting and structure for text. However, **Johnson** does disclose that a response from the system includes text which is pasted into the current application (column 4 lines 49-53).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have an entering step that includes formatting and structure for text in **Johnson** and **WC3**, since it would enable the user to adjust the output text according to their desired viewing preferences.

As per claim 8, **Johnson** in view of **W3C** disclose the conversion method of claim 2, and **Johnson** further discloses wherein said translating step includes the use of automatic speech recognition of the first input and the second input to produce the electronic format, the first input including verbal information, and the second input including non-verbal information (column 3 lines 44-49).

As per claim 9, **Johnson** in view of **W3C** disclose the conversion method of claim 3, however neither disclose wherein said translating step includes the use of sign language recognition of the first input and the second input to produce the electronic format, the first input including verbal information, and the second input including non-verbal information. However, **Johnson** does disclose that the input to the system can include any modality (column 3 lines 44-46). This suggests the system is capable of interpreting gestures, including sign language, as in input.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have a translating step that includes the use of sign language recognition in **Johnson** and **WC3**, since it would enable users with disabilities to easily enter data.

As per claims 10 and 11, **Johnson** in view of **W3C** disclose the conversion method of claim 1, but neither disclose wherein the individual version of XML is XHTML or VoiceXML for desired output. However, **Johnson** does disclose producing an output that is appropriate based on the request and current application (column 4 lines 49-53). In addition, XML files can easily be converted into a different type of XML file using XSLT, or Extensible Stylesheet Language Transformations.

Therefore it would have been obvious to one of ordinary skill in the time of the invention to have the individual version of XML as XHTML or VoiceXML in **Johnson** and **WC3**, since it would enable the user to adjust the output text according to their desired viewing preferences.

As per claim 12, **Johnson** in view of **W3C** disclose the conversion method of claim 1, and **Johnson** further discloses wherein the accessibility information includes non-verbal information (column 3 line 63 - column 5 line-32).

As per claim 14, **Johnson** in view of **W3C** disclose the conversion method of claim 11, and Johnson further discloses wherein the desired output is synthesized speech (column 7 lines 53-55).

As per claims 15, 16 and 17, **Johnson** in view of **W3C** disclose the conversion method of claim 12, but neither discloses wherein the desired output is virtual sign language,

electronic Braille, or electronic large print. However, **Johnson** does disclose that the output is an appropriate response based on the request and current application, and includes synthesized speech, text, a video clip or the like (column 4 lines 49-51). This suggests that the system is capable of producing virtual sign language, electronic Braille or electronic large print as an output.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to output the information as virtual sign language, electronic Braille or electronic large print in **Johnson** and **WC3**, since it would enable users with disabilities to adjust the output to a format that they can easily interpret.

As per claim 18, **Johnson** in view of **W3C** disclose the conversion method of claim 1, but neither disclose wherein said transforming step includes the use of extensible stylesheet language transformations to transform the standard XML encoded with accessibility information into the individual version of XML dependent on desired output. However, Extensible Stylesheet Language Transformations are known and commonly used to convert one element on an XML document into an element of another XML document.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use extensible stylesheet language transformations to transform the standard XML encoded with accessibility information into the individual version of XML dependent on desired output in **Johnson** and **WC3**, since one of ordinary skill in the art has good reason to pursue the options within his or her technical grasp in order to

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achieve the predictable result of reliably and accurately transforming an XML file into a different XML file.

As per claim 19, **Johnson** discloses a method of input conversion to output, said conversion method comprising:

entering a first input including verbal information and a second input including non-verbal information, the second input being entered in parallel with the first input, the second input being entered via a same medium as the first input, the same medium being one of a visual medium and an audial medium (column 3 line 63 - column 5 line-32, *the system accepts multimodal input that is either typed or handwritten along with non-speech input that is entered through mouse or touch screen*);

translating the first input and the second input into an electronic format (column 3 lines 63-67, *the inputs are processed by a natural language processor as part of a computer system, therefore the inputs must have been translated into electronic format*);

Johnson does not disclose converting the electronic format into standard XML encoded with accessibility information, transforming the standard XML encoded with accessibility information into individual version of XML dependent on desired output and utilizing a rendering engine to modify the individual version of XML into a format for the output. However, **Johnson** does disclose determining verbal and non-verbal semantic information (accessibility information) from the input and converting that into an individual version dependent on the desire output (column 3 line 63 - column 5 line-32).

The combined multimodal input, including a spoken phrase and a typed input or item-in-focus input, is sent to a natural language processor where it is processed by a parser/semantic interpreter and then a dialog manager. The output of the natural language processor is then sent to a dispatcher, which determines which application should process the information. Once a determination has been made the information is sent to the corresponding application where an appropriate response is generated (rendering engine), for example as synthesized speech, text pop up window or video clip, depending on the nature of the request and the current application. In addition, XML is a well known markup language which is similar to HTML but was designed to structure, store and carry data rather than display data. XML was designed to be self-descriptive: therefore tags are not predefined and must be defined by the user. Elements and attributes- which provide additional information about the elements- are defined by the user and can be extended to carry additional information. The W3C international consortium has also published specifications for an XML language that provides semantic interpretations for a variety of speech and language inputs (**W3C**). The Natural Language Semantics Markup supports a Voice Browser, which functions with a variety of input modalities and can represent meta-dialog information or meta-task utterances (section 1.1 and section 2.8). XML files can also be converted into a different XML file using XSLT, or Extensible Stylesheet Language Transformations. XSLT is a language used to convert one element on an XML document into an element of another XML document.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to convert the electronic format into standard XML encoded with accessibility information, transform the standard XML encoded with accessibility information into individual version of XML dependent on desired output and utilize a rendering engine to modify the individual version of XML into a format for the output in **Johnson**, since one of ordinary skill has good reason to pursue the options within his or her technical grasp. Additionally, it would have been obvious to combine the known multimodal interface in **Johnson** with XML, since XML data is stored as plain text data, and can therefore be easily shared amongst different applications and exchanged between incompatible systems.

As per claim 20, **Johnson** discloses a method of input conversion to output, said conversion method comprising:

entering a first input including text information and a second input including semantic information (column 3 line 63 - column 5 line-32, *the system accepts multimodal input that is either typed or handwritten (text information) along with non-speech input that is entered through mouse or touch screen, such as item-in-focus data (semantic information)*);

translating the first input and the second input into an electronic format (column 3 lines 63-67, *the inputs are processed by a natural language processor as part of a computer system, therefore the inputs must have been translated into electronic format*);

Johnson does not disclose converting the electronic format into standard XML encoded with accessibility information, transforming the standard XML encoded with accessibility information into individual version of XML dependent on desired output and utilizing a rendering engine to modify the individual version of XML into a format for the output. However, **Johnson** does disclose determining verbal and non-verbal semantic information (accessibility information) from the input and converting that into an individual version dependent on the desire output (column 3 line 63 - column 5 line-32). The combined multimodal input, including a spoken phrase and a typed input or item-in-focus input, is sent to a natural language processor where it is processed by a parser/semantic interpreter and then a dialog manager. The output of the natural language processor is then sent to a dispatcher, which determines which application should process the information. Once a determination has been made the information is sent to the corresponding application where a an appropriate response is generated (rendering engine), for example as synthesized speech, text pop up window or video clip, depending on the nature of the request and the current application. In addition, XML is a well known markup language which is similar to HTML but was designed to structure, store and carry data rather than display data. XML was designed to be self-descriptive: therefore tags are not predefined and must be defined by the user. Elements and attributes- which provide additional information about the elements- are defined by the user and can be extended to carry additional information. The W3C international consortium has also published specifications for an XML language that provides semantic interpretations for a variety of speech and language inputs (**W3C**).

The Natural Language Semantics Markup supports a Voice Browser, which functions with a variety of input modalities and can represent meta-dialog information or meta-task utterances (section 1.1 and section 2.8). XML files can also be converted into a different XML file using XSLT, or Extensible Stylesheet Language Transformations. XSLT is a language used to convert one element on an XML document into an element of another XML document.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to convert the electronic format into standard XML encoded with accessibility information, transform the standard XML encoded with accessibility information into individual version of XML dependent on desired output and utilize a rendering engine to modify the individual version of XML into a format for the output in **Johnson**, since one of ordinary skill has good reason to pursue the options within his or her technical grasp. Additionally, it would have been obvious to combine the known multimodal interface in **Johnson** with XML, since XML data is stored as plain text data, and can therefore be easily shared amongst different applications and exchanged between incompatible systems.

As per claim 21, **Johnson** in view of **W3C** disclose the conversion method of claim 19 wherein the same medium comprises automatic speech recognition (column 3 lines 44-49).

As per claim 21, **Johnson** in view of **W3C** disclose the conversion method of claim 19, however neither disclose wherein the medium comprises sign language recognition. However, **Johnson** does disclose that the input to the system can include any modality (column 3 lines 44-46). This suggests the system is capable of interpreting gestures, including sign language, as in input.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have a translating step that includes the use of sign language recognition in **Johnson** and **WC3**, since it would enable users with disabilities to easily enter data.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dorothy Sarah Siedler whose telephone number is 571-270-1067. The examiner can normally be reached on Mon-Thur 9:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 571-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DSS

/Richemond Dorvil/
Supervisory Patent Examiner, Art Unit 2626